



# Preventing injury and illness in auto body shops

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## How to improve health & safety and reduce workers' comp costs in your shop

A review of workers' compensation data by the Washington State Department of Labor & Industries (L&I) showed that workers' compensation premium rates in the auto body repair industry rose at a rate far higher than the average of all industries in seven out of the past eight years. Finger cuts and debris in eyes were the leading causes of injury, but overexertion and back injuries drove up claim costs and rates. All these injuries are preventable.

### **About your industry**

### **Membership**

Risk Class 3412-00 (Automobile and truck: body and fender repair shops) applies to establishments that repair and refinish automobile and truck body panel components. This risk class includes collision repair shops and spray-on truck-bedliner companies.

Workers' compensation premium rates for your industry have increased significantly over the last few years. The information inside this pamphlet will help you improve health & safety and reduce your costs!

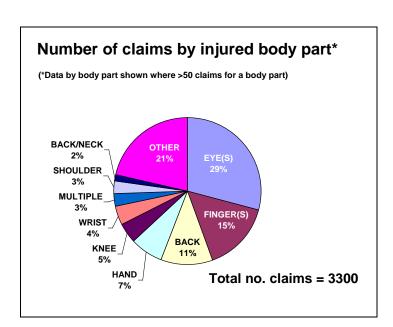
### Serious injuries are driving up premiums

Rates have risen because of the number of longterm disability claims, many of them from back injuries. While most of the industry's injuries are minor, overexertion, back injuries and asthma frequently result in a loss of wages and permanent partial disabilities.

### What do the data look like?

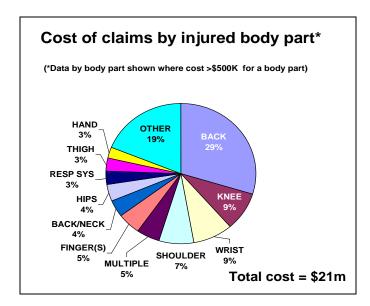
### What are the most frequent claims?

When we look at the workers compensation data for your risk class from 1995 through 2005, we find that the most **frequent** claims are for injuries to the eyes, followed by fingers, backs, hands, etc. See the chart below for a breakdown of the number of claims by injured body part.



### What are the most costly claims?

However, we see a different picture when we look at the claims data for the same period **by cost**:



These data show that although back injuries are not the most frequent, they are the most costly because of the time loss associated with these serious and debilitating injuries. Note that although eye and finger injuries were very common, they are not particularly costly because they frequently do not result in time loss.

### What is causing these injuries?

This is what we find when we look more closely at these workers' compensation claims:

- **Eye injuries** are frequently caused by particles that impact unprotected eyes, especially when prepping vehicles with grinders and sanders.
- Cuts and lacerations to fingers frequently result from using knives and other blades while prepping vehicles for painting.
- Back and other musculoskeletal injuries result from lifting heavy objects and working in awkward postures when disassembling and prepping vehicles.
- **Respiratory (lung) diseases** like work-related asthma result from exposure to the isocyanates present in polyurethane-based coatings, linings, and paints.

## How can you prevent these injuries in your shop?

Talk to your employees about the most frequent and costly injuries. Get their input on what they think might hurt them on the job, and then ask them what could be changed to prevent those injuries. When employees participate in ways to prevent injuries, they are much more likely to comply with changes you might make. For example, when employees chose their own protective eyewear from a catalogue, they are more likely to wear it.

Here are some simple measures you can take to protect your workers:

### Prevent back and other musculoskeletal injuries:

- Use jacks and lifting aids for lifting and holding heavy parts for installation.
- Store heavy parts above the floor between knee and shoulder level.
- Use rolling work stands so workers avoid having to bend over to pick up tools.
- Use pads on fenders or body so workers can lean on the car when working towards the middle of the vehicle.
- Avoid placing heavy parts on the ground if they're going to be re-installed. Hang them up around or on the lift, using a device like a Tire Hanger.
- o Ask for help with big, heavy or awkward parts.
- Learn how to lift properly. See L&I's "Quick Tips for Lifting" at <u>www.LNI.wa.gov/IPUB/</u> 417-055-909.pdf.

### Prevent eye injuries:

- o Develop an eye protection use policy.
- Work with your employees to find eye protection that works for them and offers adequate protection, including top and side protection.

 Enforce the use of eye protection by your employees whenever they are on the shop floor.

### Prevent finger cuts and lacerations:

- Provide protective gloves. A variety of work gloves are available that can help prevent cuts from sheet metal, glass, and other sharp or jagged objects.
- Always keep knives and other blades sharp to avoid the need to apply excessive force.
- Always cut away from your body, rather than towards yourself.
- Make sure that discarded blades are not left around the shop where workers can cut themselves.

### Prevent work-related asthma:

- Provide extended cuff nitrile gloves, chemical resistant shoot suits, headsocks, and other coverings. No exposed skin should come into contact with catalysts, hardeners, or mixed coating and paint products.
- Catalyst and hardener spills should be cleaned up promptly and any exposed skin should be washed thoroughly. The hardener does not evaporate and can move to other shop areas from contaminated hands and footwear.
- Replace all your latex gloves with extendedcuff nitrile gloves. You can use nitrile gloves for practically every task performed in your shop – from surface preparation to application of paints and coatings.
- A supplied air respirator is the best choice for protecting workers. However, the compressor and other associated equipment must be properly maintained and must deliver sufficient uncontaminated air.
- A full face air purifying respirator equipped with organic vapor (OV) cartridges and N95 pre-filters is the second-best choice. This equipment also provides eye protection. Any respirator must be used within a defined respiratory protection program, including fit testing (for tight fitting styles) and a formal cartridge change-out schedule.

- o Read the MSDSs for your products to find out whether they contain isocyanates and other hazardous chemicals. The most common isocyanate hardener used in automotive paints is hexamethylene diisocyanate (HDI). In spray-on truck bed linings, the hardener is mostly MDI (methyl diphenyl diisocyanate).
- Encourage any worker with symptoms such as wheezing, chest tightness, shortness of breath, or coughing to see their doctor immediately. Asthma is a serious disease. If untreated, it may severely affect the workers' health or even cause death. Asthma may get better if diagnosed early and treated properly.

### How can you get help?

### **Educational materials:**

- L&I's "Rates Watch" for the Auto Body Industry at *RatesWatch.LNI.wa.gov*.
- L&I's Ergonomics Ideas Bank at <u>www.LNI.wa.gov/Safety/Topics/ReduceHazards/</u> ErgoBank.
- Cal OSHA's poster "Work Smarter Not Just Harder" at <u>www.dir.ca.gov/dosh/</u> <u>dosh\_publications/autopost.pdf</u>
- "Automotive Workshop Safety" at <u>www.workcover.vic.gov.au/vwa/publica.nsf/0/3F</u> FBC49B529CA5F2CA256FD30008934E?Open.
- EPA's Design for the Environment Program addresses many of the health & safety issues in auto body shops. See the web sites at <a href="https://www.epa.gov/opptintr/dfe/pubs/auto/trainers/index.htm">www.epa.gov/opptintr/dfe/pubs/auto/trainers/index.htm</a> and <a href="https://www.epa.gov/dfe/pubs/#auto">www.epa.gov/dfe/pubs/#auto</a>.
- SHARP Publication 64-1-2004 "Your Lungs, Your Work, Your Life: What you should know about work-related asthma." Available at <a href="https://www.LNI.wa.gov/Safety/Research/Files/OccHealth/LungsLife.pdf">www.LNI.wa.gov/Safety/Research/Files/OccHealth/LungsLife.pdf</a>.
- For information about controlling worker exposures to isocyanates in truck bed linings and paints, visit L&I's web site at <u>www.lni.wa.gov/Safety/Topics/AtoZ/TruckBed</u> <u>Liners</u>.

### Help from L&I

• L&I offers a variety of services to help prevent injuries in your workplace. Call 1-800-423-7233 or your local L&I office to request a no-charge safety and health or risk management consultation. Online training tools are at: <a href="https://www.lni.wa.gov/safety/traintools/">www.lni.wa.gov/safety/traintools/</a>.

### **Yellow Page headings**

- Industrial Hygiene Consultants.
- Safety Equipment and Clothing (gloves, respirators, coveralls, etc.).

### SHARP - Promoting Safer, Healthier Workplaces

This pamphlet was produced by the Safety & Health Assessment & Research for Prevention (SHARP) program - an independent research program within the Washington State Department of Labor & Industries. SHARP's researchers and scientists partner with business and labor to develop sensible, effective solutions to identify and eliminate industry-wide hazards.

If you have questions about this pamphlet, the SHARP program, or require assistance, please contact us at:

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